



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/554,261

10/18/2006

Chang-Hoi Koo

678-2289

3135

66547 7590 06/03/2011

THE FARRELL LAW FIRM, P.C.

290 Broadhollow Road

Suite 210E

Melville, NY 11747

EXAMINER

SABOURI, MAZDA

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

06/03/2011

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/554,261	<b>Applicant(s)</b> KOO ET AL.	
	<b>Examiner</b> MAZDA SABOURI	<b>Art Unit</b> 2617	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2011.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 14-17,22-24,39-42 and 50-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-17,22-24,39-42 and 50-60 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claims filed on 3/8/2011 have been considered but are moot in view of the new ground(s) of rejection.
2. Applicant's amendments have changed the scope of the pending claims rendering the argument with respect to the rejection of the previous claims moot.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
5. **Claims 14-16, 39-42, 51, 52 and 55** rejected under 35 U.S.C. 103(a) as being unpatentable over US 2003/0198179 (Koo et al.) in view of US 2005/0266848 (Kim).

6. **As to claims 14 and 39**, Koo teaches a method for performing network access by a subscriber station having a receiver and controller in a mobile communication system, the method comprising the steps of:

- if a ranging with a base station is failed, receiving a backoff domain including backoff start information and backoff end information from the base station (*collision during ranging necessitates backoff process using UCD messages, see paragraphs 14-16*);
- determining a backoff value for network access according to the backoff start information and the backoff end information (*backoff start and backoff end used by UE to determine backoff value, see paragraphs 14-16*).

Koo does teach that ranging can be performed when a UE initially access a base station but fails to disclose the ranging process being performed during handover.

In a similar field of endeavor, Kim teaches a UE performing ranging with a target base station during handover (*see Kim, figure 3*).

It would have been obvious to one of ordinary skill in the arts at the time the invention was made to combine the teachings of Kim with those of Koo, so that a UE could use ranging to properly calibrate the channel between the UE and the target base station during handover (*see Koo, paragraph 5*).

**As to claims 16 and 55**, Koo teaches a method for performing network access by a base station having a transmitter in a mobile communication system, the method comprising the steps of:

- broadcasting information to subscriber stations using a forward common control channel periodically or on an on-demand basis (*UL\_MAP and UCD messages broadcasted to UE on forward control channels. The ranging itself can be done on demand [initial ranging, bandwidth request ranging] or periodically [periodic/maintenance ranging], see paragraphs 6, 7, 10, 15 and 34-37,*
- wherein the information comprises channel assignment information for corresponding to a reverse common access channel and separation information of at least two backoff domains including backoff start information and backoff end information in the reverse common access channel (*the UL\_MAP and UCD messages comprises ranging codes as well as backoff windows for different types of ranging used by the UE in the reverse link access channel, see paragraphs 34-37).*

What is lacking is the ranging process being performed during handover. Koo does teach that ranging can be performed when a UE initially access a base station but fails to specifically mention handovers.

In a similar field of endeavor, Kim teaches a UE performing ranging with a target base station during handover (*see Kim, figure 3*).

It would have been obvious to one of ordinary skill in the arts at the time the invention was made to combine the teachings of Kim with those of Koo, so that a UE could use ranging to properly calibrate the channel between the UE and the target base station during handover (*see Koo, paragraph 5*).

**As to claims 15 and 40**, Koo further teaches re- requesting ranging after waiting for the determined backoff value (*see paragraph 16*).

**As to claims 41 and 51**, Koo further teaches wherein the backoff start information is formed with an initial backoff window size for performing initial ranging of the subscriber station for a handover processing time (*backoff start for initial ranging can be in UCD message, see paragraphs 36-37*).

**As to claims 42 and 52**, Koo further teaches wherein the backoff end information is formed with a final backoff window size for performing initial ranging of the subscriber station (*backoff end for initial ranging can be in UCD message, see paragraphs 36-37*).

7. **Claims 17, 22-24 and 56-59** rejected under 35 U.S.C. 103(a) as being unpatentable over US 2003/0198179 (Koo et al.) in view of US 2005/0266848 (Kim) as applied to claims 14, 16, 39 and 55 above, and further in view of Applicant's Admitted Prior Art as defined in the Specification (herein referred to as AAPA).

8. **As to claims 17 and 56**, what is lacking from Koo is a receiver for receiving an access request message from one of the subscriber stations, and wherein the transmitter transmits an access request response message to one of the subscriber stations, when the access request message is received.

In a similar field of endeavor, Kim further teaches a basestation receiving an access request message and responding with a message (*handover request/response, see Kim, figure 3 and paragraphs 64-66*).

It would have been obvious to one of ordinary skill in the arts at the time the invention was made to combine the teachings of Kim with those of Koo, so that a UE could request handover from a serving base station when network conditions call for it.

What is lacking from Koo in view of Kim is the use of CIDs in responses from a base station to a subscriber station.

In a similar field of endeavor, AAPA teaches base station responses to subscriber station messages having CIDs (*see Specification, page 6, lines 5-15*).

It would have been obvious to one of ordinary skill in the arts at the time the invention was made to combine the teachings of AAPA with those of Koo in view of KIM, so that the subscriber station could correctly identify the response to the message it sent (*see Specification, page 6, lines 9-15*).

**As to claims 22, 23, 57 and 58**, what is lacking from Koo is wherein the access request message includes one of an initialized access request message requested by one of the subscriber stations to the base station for a handover processing time, and a network access request message including a field indicating a handover request type.

In a similar field of endeavor Kim further teaches fields defining message types during handover, a handover process which includes handover requests and responses (*see Kim, paragraphs 64-66*).

It would have been obvious to one of ordinary skill in the arts at the time the invention was made to combine the teachings of Kim with those of Koo, so that the subscriber station and base station could properly identify the messages that are sent and received between them.

**As to claims 24 and 59**, Koo further teaches wherein the network access request message is determined by using information on previously assigned pseudo-random codes (*ranging codes~PN codes. Those codes used to calibrate the channel between the UE and Node B. A handover request as that taught by Kim would be sent on a channel calibrated using these PN codes, see Koo, paragraphs 6,7 and 32*).

9. **Claims 50, 53, 54 and 60** rejected under 35 U.S.C. 103(a) as being unpatentable over US 2003/0198179 (Koo et al.) in view of US 2005/0266848 (Kim) as applied to claims 14, 16, 39 and 55 above, and further in view of Applicant's Admitted Prior Art "Backoff-Based Priority Schemes for IEEE 802.11" (Xiao).

10. **As to claims 50, 53, 54 and 60**, Koo in view of Kim further teaches wherein the backoff domain corresponds to a priority level of the ranging and wherein the priority level is determined according to whether handover of the subscriber station is performed (*Koo teaches different backoff windows for different ranging. Initial ranging, which would be used during the handover taught by Kim has its own backoff window, see Koo paragraphs 36 and 37*).

What is lacking from Koo in view of Kim is wherein the priority level is determined according to a service quality level of data provided to the subscriber station.

In a similar field of endeavor, Xiao teaches priorities backoff windows based on service quality levels (see Xiao, section II. Priority Schemes and section V. Conclusions).



It would have been obvious to one of ordinary skill in the arts at the time the invention was made to combine the teachings of Xiao with those of Koo in view of Kim, so that higher service class traffic could be transmitted first.

***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MAZDA SABOURI whose telephone number is (571)272-8892. The examiner can normally be reached on Monday-Friday from 9:00-5:30.

Art Unit: 2617

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on 571-272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mazda Sabouri  
Examiner  
Art Unit 2617

/M. S./  
Examiner, Art Unit 2617

/Charles N. Appiah/  
Supervisory Patent Examiner, Art Unit 2617